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09/783,505	02/13/2001	Tong-Xian Chen	MS1-724US	4615
22801	7590	05/26/2004	EXAMINER	
LEE & HAYES PLLC 421 W RIVERSIDE AVENUE SUITE 500 SPOKANE, WA 99201			WU, JINGGE	
			ART UNIT	PAPER NUMBER
			2623	

DATE MAILED: 05/26/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/783,505

Applicant(s)

CHEN ET AL.

Examiner

Jingge Wu

Art Unit

2623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 17 March 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 15-35, 37-44 and 46-54 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 15-29, 35, 37-44, 47-47, 49-54 is/are rejected.
- 7) ☐ Claim(s) 30-34 and 48 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

***DETAILED ACTION***

1. Applicants' response to the last Office Action, filed on March 17, 2004 has been entered and made of record.
2. The rejections of claims 36 and 45 have been rendered moot by the cancellation of the claim.
3. Applicants' amendment has required new grounds of rejection. New grounds rejection are therefore presented in the Office Action.

***Specification***

4. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: Claim language "without requiring faces within the image to be previously detected" is not described in the specification. In contrast, the specification describes that "a skin color filter is initially applied to a received image to identify areas of the image that includes skin color. Those areas are then searched to identify red pixels within the areas." (page 2, lines 23-25) and "Identifier 130 to analyze only those pixels that are within the areas that include skin color....'Face detection using quantized skin color regions merging and wavelet packet analysis',..., which is hereby incorporated by reference." (page 6 lines 1-12). Thus, in the instant invention, skin color areas, which are face areas, are detected before the red eye detection.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

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The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 15 and 50 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim language "without requiring faces within the image to be previously detected" is the new matters. Claims 16-34 and 51-52 depend from claims 15, and 50, respectively, are thus, rejected.

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 15-21, 24-25, 50-52 are rejected under 35 U.S.C. 102(b) as being anticipated by Japanese Patent 09-261580 to Hiromichi, (thereafter Schildkraut, a reference of record).

As to claim 15 (as best understanding of the Examiner), Hiromichi discloses a system comprising:

a region detecting module to detect regions of an image that include pixels of a particular one or more colors without requiring faces within the image to be previously detected (fig. 3, S3-S6 and fig. 4, 0023-0025, note that Hiromichi does not detect face at all);

an eye confirmation module to receive the detected regions from the region detection module and identify, for each of the detected regions, whether the detected region is part of an eye (fig. 3, S7, and fig. 5, 0026-0029).

As to claims 16-17, Hiromichi further discloses different red shades of the same color (skin color) (0022).

As to claims 18-21, Hiromichi further discloses digital film image processed by a computer (abstract, 0016); part of human eye (pupil, 0026).

As to claim 24, Hiromichi further discloses a skin color module to detect of skin color in the image and indicate the detected areas to the region detection module ( fig. 3, S3-S5, 0023-0024); and the region detection module is to search within the detected areas to detect regions that includes the pixels of skin color (0023-0025).

As to claim 25, Hiromichi further discloses the eye confirmation module comprises a classifier to classify each of detected regions as either part of an eye or not part of an eye (fig. 5 0026-0029).

As to claims 50-52, the claims are the corresponding method, camera, and system claims to claims 15-21. The discussions are addressed with regard to claims 15-21.

9. Claims 35-40, 43-44, 46, 49, and 53-54 are rejected under 35 U.S.C. 102(e) as being anticipated by US 6292574 to Schildkraut et al. (hereinafter Schildkraut, a reference of record).

As to claim 35, Schildkraut discloses a method comprising:

receiving an image (col. 2 lines 32-34);

searching a set of areas of the image for candidate pixels of one or more colors, wherein the one or more colors comprises colors corresponding to red-eye (fig. 2, 4-6, col. 4 lines 1-41);

combining the candidate pixels into a set of one or more pixel groups, wherein the combining comprises combining candidate pixels into same group if the candidate pixels are adjacent one another (col. 3 lines 34-60, note that the pixel belong to the eight nearest neighboring pixel is indeed adjacent another); and

for each pixel group in the set of one or more pixels groups, classifying (correlating) the pixel group as being part of an eye or not part of an eye (fig. 2 S20 and fig. 11, col. 6 lines 38-55, col. 7 line 5-59).

As to claim 37, Schildkraut further discloses receiving the image from a camera (col. 2 lines 32-39).

As to claims 38-39, Schildkraut further discloses identifying areas within the image that are a set of skin colored with shades of red (col. 3 lines 18-67).

As to claim 40, Schildkraut further discloses combining two candidate pixels into the same pixel group if the two candidates pixels are within a threshold distance of each other (col. 3 lines 34-60, note that the MaxMergecolorDistance is the threshold).

As to claims 43-44, Schildkraut further discloses the classifying comprises:

applying a window (zone) to the image and comparing pixels within the widow to a eye template that is not altering the size, altering the scale of image (different zones),

and repeating the applying and comparing based on the scale-altered image (fig. 11-12, col. 7 lines 5-59, col. 12 lines 40-57).

As to claim 46, Schildkraut further discloses removing, based on a set of rules (thresholding rule), groups from the set of one or more pixel groups (col. 3 lines 34-60).

As to claims 53-54, the claims are the corresponding system claims to claims . The discussions are addressed with regard to claims 35 and 46.

As to claim 49, Schildkraut further discloses one or more computer-readable memories containing a computer program that is executable by a processor to perform the method recited in claim 35 (col. 2 lines 31-39, memories and a processor are inherent in a computer system).

***Claim Rejections - 35 USC § 103***

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 22-23, 47-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hiromichi or Schildkraut in view of US 6285410 to Marni.

As to claim 22-23, Hiromichi does not expressly mention the implementation of red-eye correction into the camera and printer.

Marni, in an analogous environment, teach a photo kiosk which implements the red-eye correction in the camera and printer (fig. 1)

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the red eye correction in the camera and/or printer

as taught by Marni in the system of Hiromichi or SchildKraut in order to correct the artifacts caused by the red-eye (Marni, col. 1).

As to claim 47, Schildkraut does not expressly mention checking whether flash was used and using red-eye correction only if the flash is used.

Examiner takes Official Notice that the feature is notoriously well known in the art, especially in automatically red-eye correction.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the detection flash in the system in order to efficiently trigger the red eye correction procedure.

12. Claims 41-42, are rejected under 35 U.S.C. 103(a) as being unpatentable over Hiromichi or Schildkraut in view of US 6204858 to Gupta.

As to claims 41-42, Hiromichi or Schildkraut does not expressly mention the rule related to the shape of the red-eye.

Gupta, in an analogous environment, teaches a rule which decides whether the red-eye area is a circular region (fig. 4-5, col. 4 lines 4-31).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the scheme of Gupta into the system of Hiromichi or SchildKraut in order to correctly identify red-eye region (Gupta, col. 1).

13. Claims 26-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hiromichi in view of Schildkraut.

As to claim 26, Hiromichi does not mention template.

Schildkraut, in an analogous environment, discloses the feature (the discussions are addressed with regard to claims 43-44).



It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate scheme of Schildkraut into the system of Hiromichi in order to correctly identify and correct red-eye region(Schildkraut, col. 1).

As to claims 27, Schildkraut further discloses a pixel identifier that is trained to colors associated with red eye, and identify pixels within the regions having colors that are close to the red eye color (fig. 11, col. 8 line-col. 10 line60, col. 11 lines 34-61).

As to claims 28 and 29, Schildkraut further discloses a pixel grouper coupled to receive the identified pixels from the pixel identifier and group together adjacent pixels based on the distance of one another(fig. 2 and 11, col. 3 lines 34-60).

#### ***Allowable Subject Matter***

14. Claims 48 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including **all of the limitations of the base claim and any intervening claims**.

15. Claim 30 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, first paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Claims 31-34 depend from claim 30, are, therefore would be allowable.

#### ***Conclusion***

16. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

#### **Contact Information**

17. Any inquiry concerning this communication or earlier communications should be directed to Jingge Wu whose telephone number is (703) 308-9588. He can normally be reached Monday through Thursday from 8:00 am to 5:30 pm. The examiner can be also reached on second alternate Fridays.

Any inquiry of a general nature or relating to the status of this application should be directed to TC customer service whose telephone number is (703) 306-0377.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Amelia Au, can be reached at (703) 308-6604.

The Working Group Fax number is (703) 872-9314.

Jingge Wu

Primary Patent Examiner

